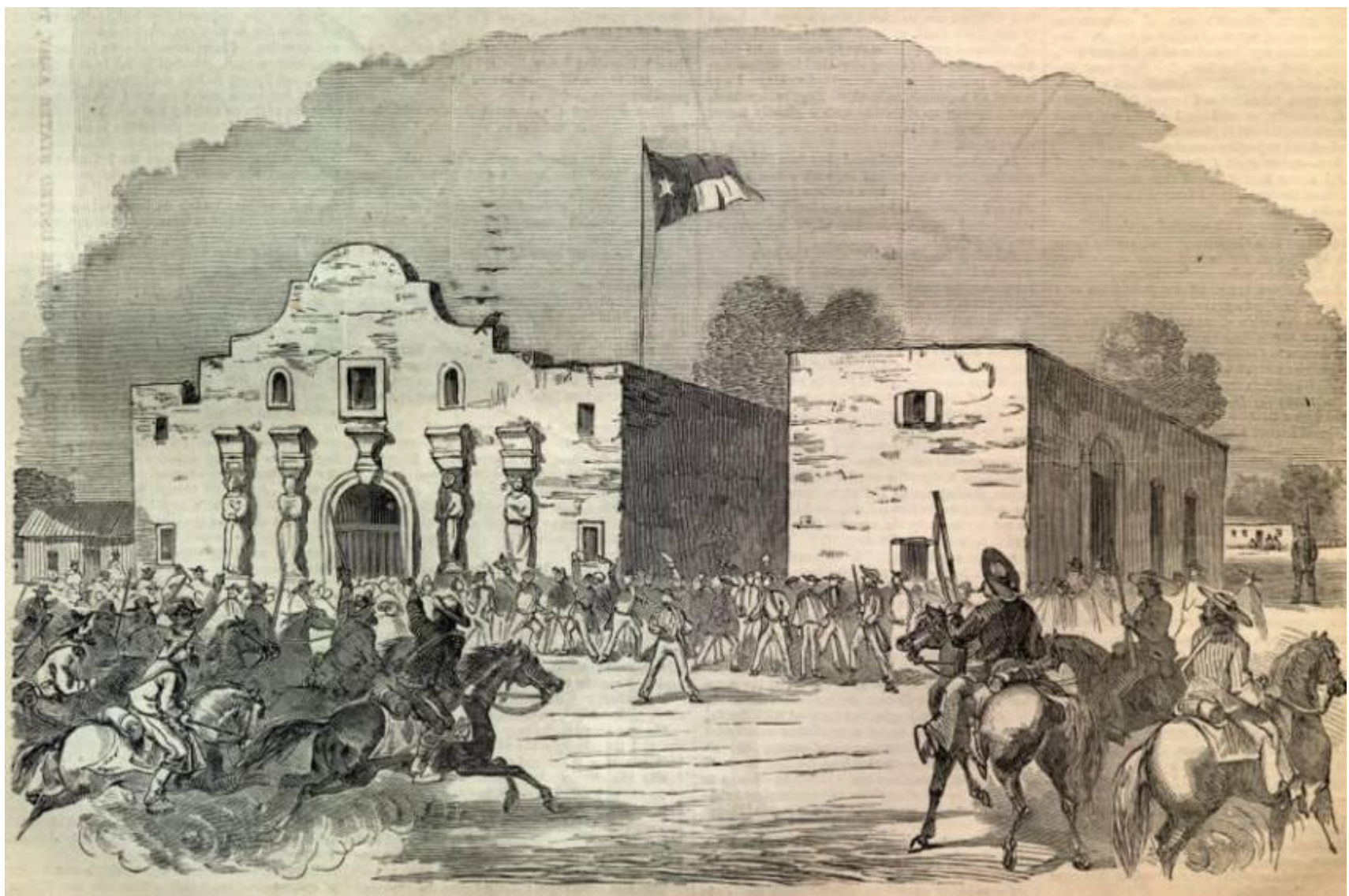




DOE ENERGY STAR Program Update

2009 ENERGY STAR Lighting Partner Meeting
March 18, 2009

Richard H. Karney, P.E.
ENERGY STAR Products Manager
U.S. Department of Energy





Remember the Alamo!



Special Recognition



ENERGY STAR Emerging Partner Award

DOE ENERGY STAR Program Update



Presentation Outline

1. ENERGY STAR Solid-State Lighting Program Update
2. ENERGY STAR CFL Program Update
3. 2009 ENERGY STAR CFL Promotions

DOE ENERGY STAR Program Update



ENERGY STAR Solid-State Lighting Program Update

JOINT EPA/DOE STATEMENT ON ENERGY STAR SSL CRITERIA FOR LIGHTING PARTNERS MEETING

March 18, 2009

The administration is aware of issues with regard to ENERGY STAR criteria for Solid State Lighting products and is committed to addressing these issues and working with program stakeholders to continue to build on the success of the ENERGY STAR program and the benefits it provides in reducing energy use and avoiding emissions of greenhouse gases. Specifically, the EPA and DOE will resolve outstanding issues regarding interagency coordination and division of responsibilities within 45 calendar days.

Goals of the SSL Program



- Accelerate market adoption of quality SSL products
 - Distinguish good products from poor products
 - Avoid buyer dissatisfaction
 - Do not repeat the lessons from CFL experience
- Market will have many products not qualified; ENERGY STAR will provide differentiation and consumer value proposition of quality

How will these goals be met?



- Limit coverage to applications that are ready now
- Focus on both residential and commercial markets
- Start slow and accelerate the program with the technology
 - 2 Phased approach
- Luminaire efficacy key metric

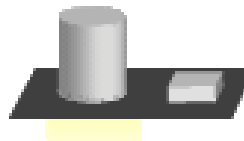
System Efficacy Vs. Luminaire Efficacy

(Recessed Downlights Example)

CFL System
(Lamp + Ballast)



CFL Fixture



Luminaire



LED System
(LEDs + Driver)



LED Fixture



**Preferred
metric for LED
luminaires**



Why ENERGY STAR for SSL?



- DOE has been involved in the commercialization of LED Technology for a number of years
- Products were showing up on the market
- Questionable quality of some products
- We do not want a repeat of our experience with CFLs

We needed a program to:



- Help referee the playing field
- Establish minimum performance requirements
- Put SSL in a position to succeed with consumers

Rationale

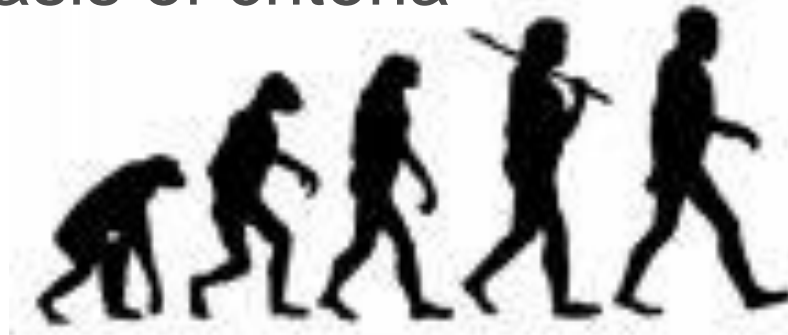


- Ensure quality products are available
- Generate satisfied, loyal customers
- Start slow, then speed up
 - Two category approach
- Provide flexibility up front to minimize testing costs knowing there will be consequences on the back end
- Achievable efficacy requirements

Evolving Two-Category Approach



- Approach recognizes rapidly changing technology
- Category A: Allows early participation of limited range of SSL products
- Category B: In about 2 years, Category A will be dropped entirely; Category B then becomes basis of criteria



ENERGY STAR SSL - Category A



- Establishes minimum luminaire efficacy
 - Benchmarked to fluorescent
- A number of general illumination applications
 - High efficacy potential
- Category A will continue to expand to include other near-term products



Category A - Residential Applications



- Recessed, surface and pendant-mounted downlights
- Under-cabinet kitchen lighting
- Portable desk lights
- Ceiling-mounted with diffusers
- Cove lighting
- Surface-mounted with directional heads
- Outdoor wall-mounted porch lights
- Outdoor step lights
- Outdoor pathway lights
- Outdoor pole/arm-mounted decorative



Category A - Commercial Applications



- Recessed, surface and pendant-mounted downlights
- Under-cabinet shelf-mounted task lights
- Portable desk lights
- Wall wash luminaires
- Bollards



Where are we today?



Manufacturer Partners	75
Qualified Products	XX
Scheduled EEPS Promotions	6 running; 5 planned
Web visits	Jan. Over 10,000 Feb. Over 14,000

Qualified Products



First Qualified Product



Kichler's Design Pro Under-cabinet kitchen system

- Designed to work as a system
- Luminaire efficacy of 37 lm/watt
- Delivers over 400 lumens with a CCT of 3000K

Newest Products



- EML Technologies Outdoor Porch Light
- Cree LR6
- Cooper Halo Downlight
- Kichler Rail Light
- More are in the queue



Why aren't there more?



- Many manufacturers are still in testing
- Some confusion over what's required for testing
- Delay in LM-80 being finalized
- On-line Product Submittal Tool experienced some early hiccups
- The Economy



Kichler Rail Light – First product qualified under version 1.1

Criteria Changes



- Version 1.1 went into effect Super Bowl Sunday (2/1/09)
 - 4 Applications removed from final version
- First draft of a criteria for replacement lamp distributed on Jan. 16
- Review of additional applications is on-going

Draft Integral LED Lamp Criteria



- First draft was distributed on January 16, 2009
 - DOE provided a 6-week comment period
- DOE outlined a number of issues for feedback and direction:
 - Dimming
 - Non-standard designs
 - Low voltage MR16s
 - Reliability Testing
- DOE received 26 comments on the Draft

Integral LED Lamps – Next Steps



- 2nd Draft will be released in April with time for comments
- Webinar is scheduled for April 23
- Final Criteria issued in July
- Effective Date 270 days thereafter

ENERGY STAR SSL Partner Support



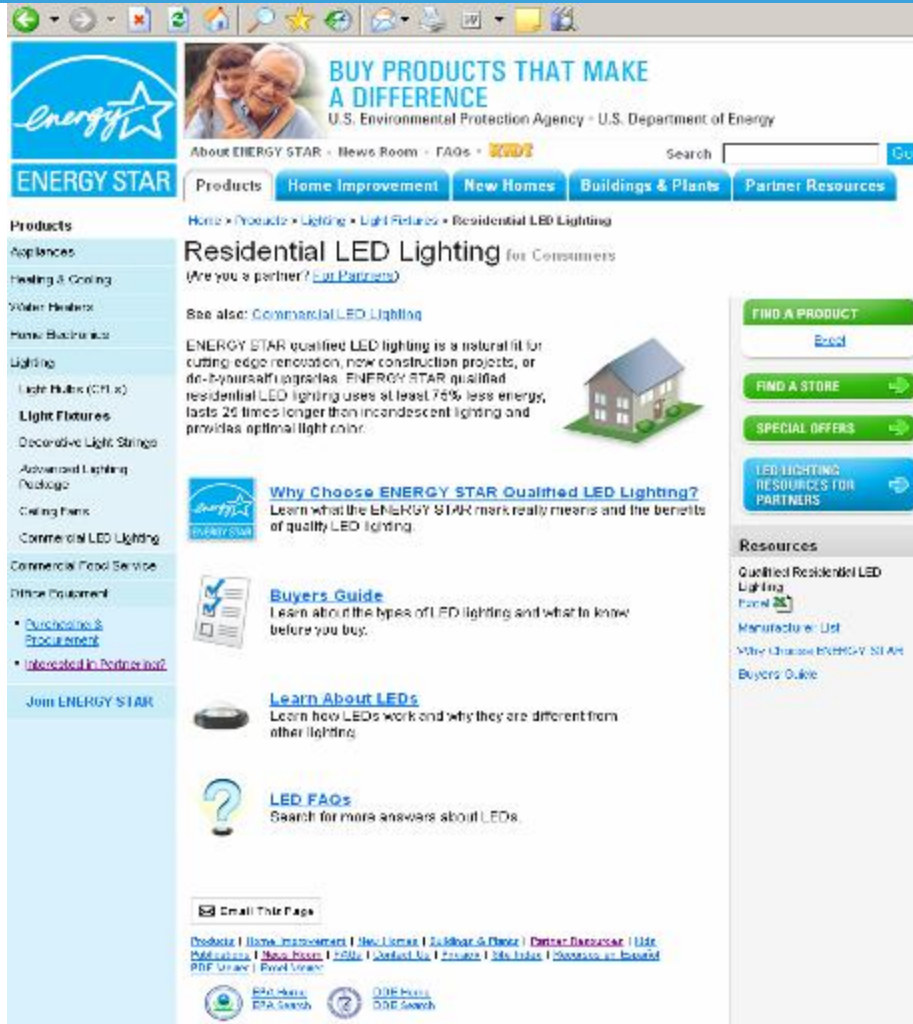
- *New Web-based qualification process*
- *New Web pages at www.energystar.gov/led*
- Regular updates:
 - SSL Technical Information Network
- Partners who want to promote SSL products prior to qualification:
 - Promoting untested products is NOT encouraged

Program Tools and Resources



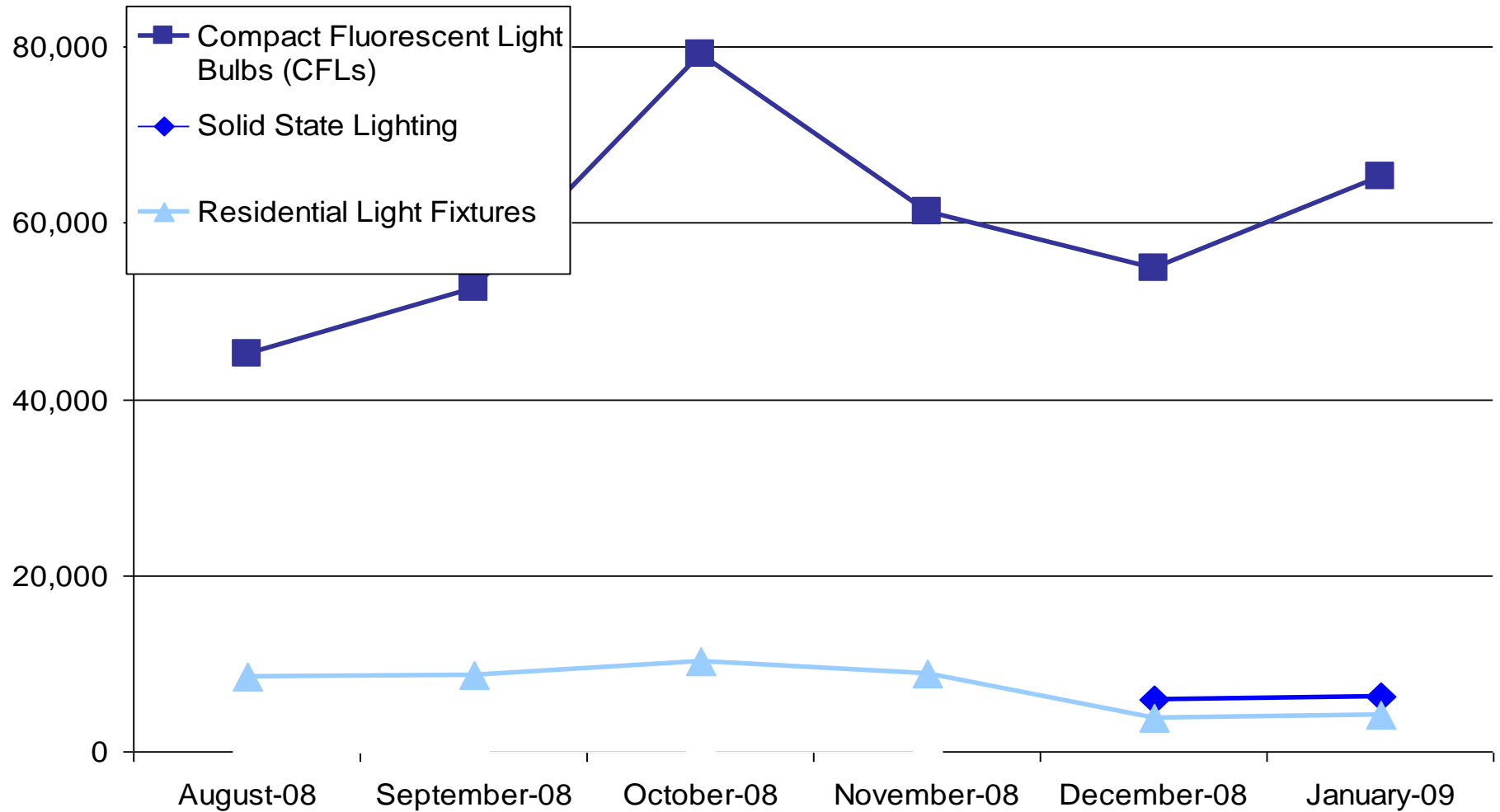
- Web pages
 - General LED information
 - Content for the Commercial Market
- Partner Resource Guide
 - Info graphics
 - SSL Facts & Figures
- Program Design Guide
 - Mini Business Case
- Media Outreach and support

Web Content



- Product List
- Product Finder
- Rebate Finder
- FAQs
- Consumer Education Tools
- Savings Calculator (under development)

Web site Traffic



Partner Resource Guide



- Provides sample marketing messaging
- Contains graphs and tables;
 - customized to meet your needs
- Compares LEDs to other light sources



Sample Info Graphics

Did you know?

You need 40 incandescents or 6 CFLs to match the lifespan of 1 LED!



Incandescent
Light Bulbs

CFLs

LED

Save BIG with LEDs...

LEDs use 10-12 times less energy than incandescent bulbs!



Substituting 1 LED for 40 incandescent bulbs can save you **\$738³**

SSL Priorities for 2009



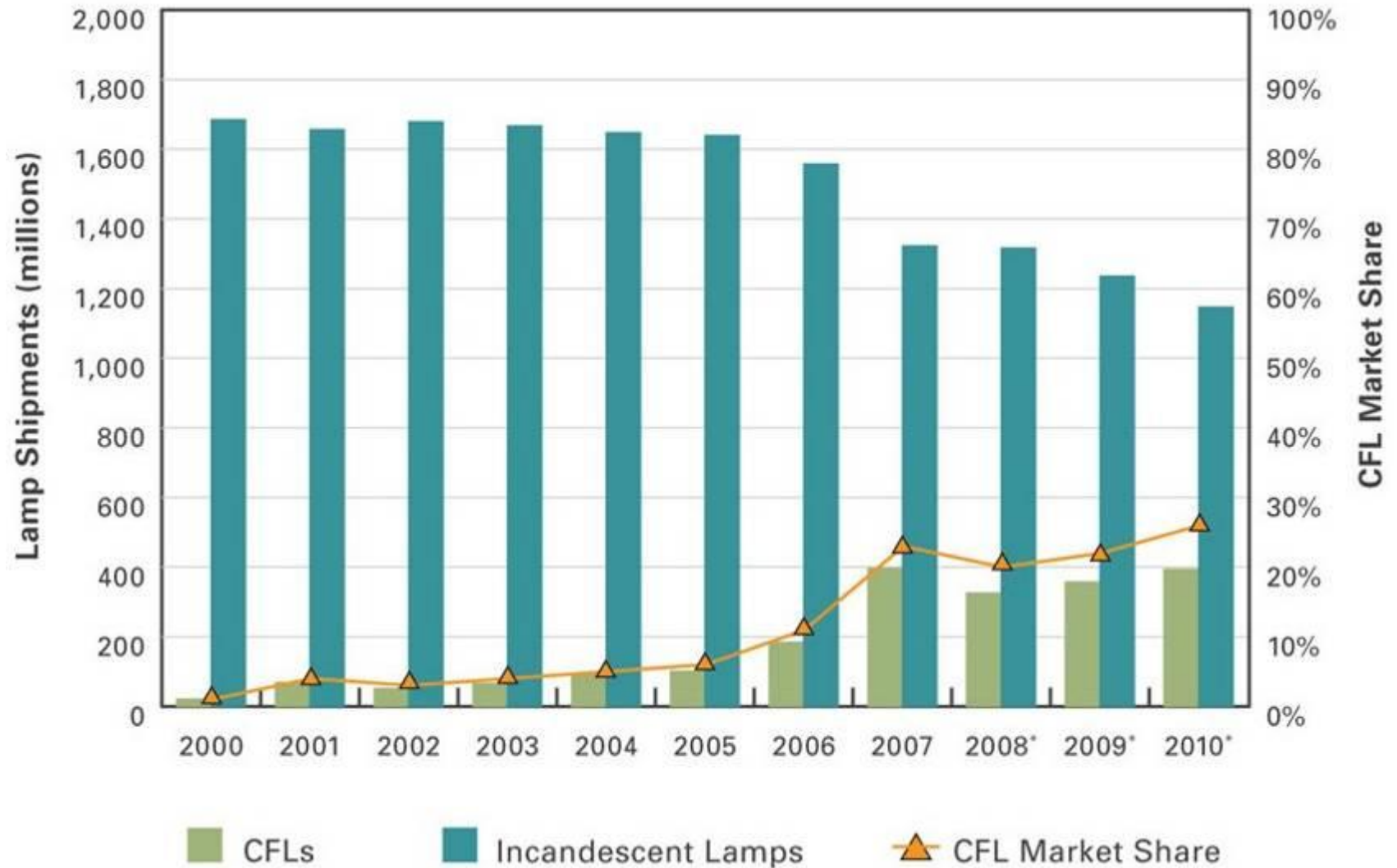
- Develop and launch Third Party Testing and Verification Program
- Expand list of applications eligible for the program
- Increase the 3 P's (Products, Promotions, Programs)
- Introduce LED-based replacement products
- Work with Partners to ensure consumer adoption
 - Quality products - Manufacturers
 - Easily accessible – Retailers, Showrooms, and Distributors
 - Competitively Priced – Utility incentives, promotions

DOE ENERGY STAR Program Update

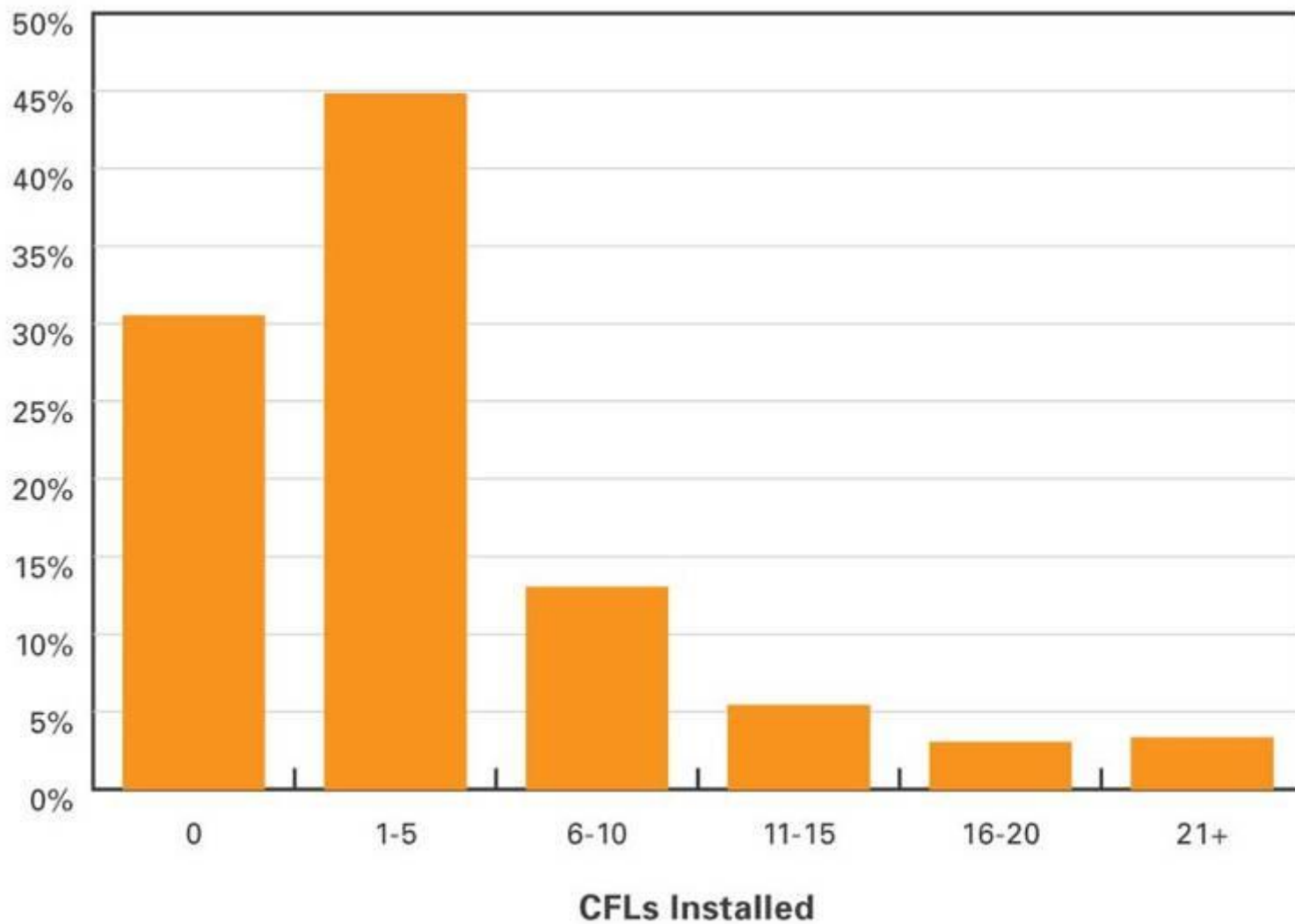


ENERGY STAR CFL Program Update

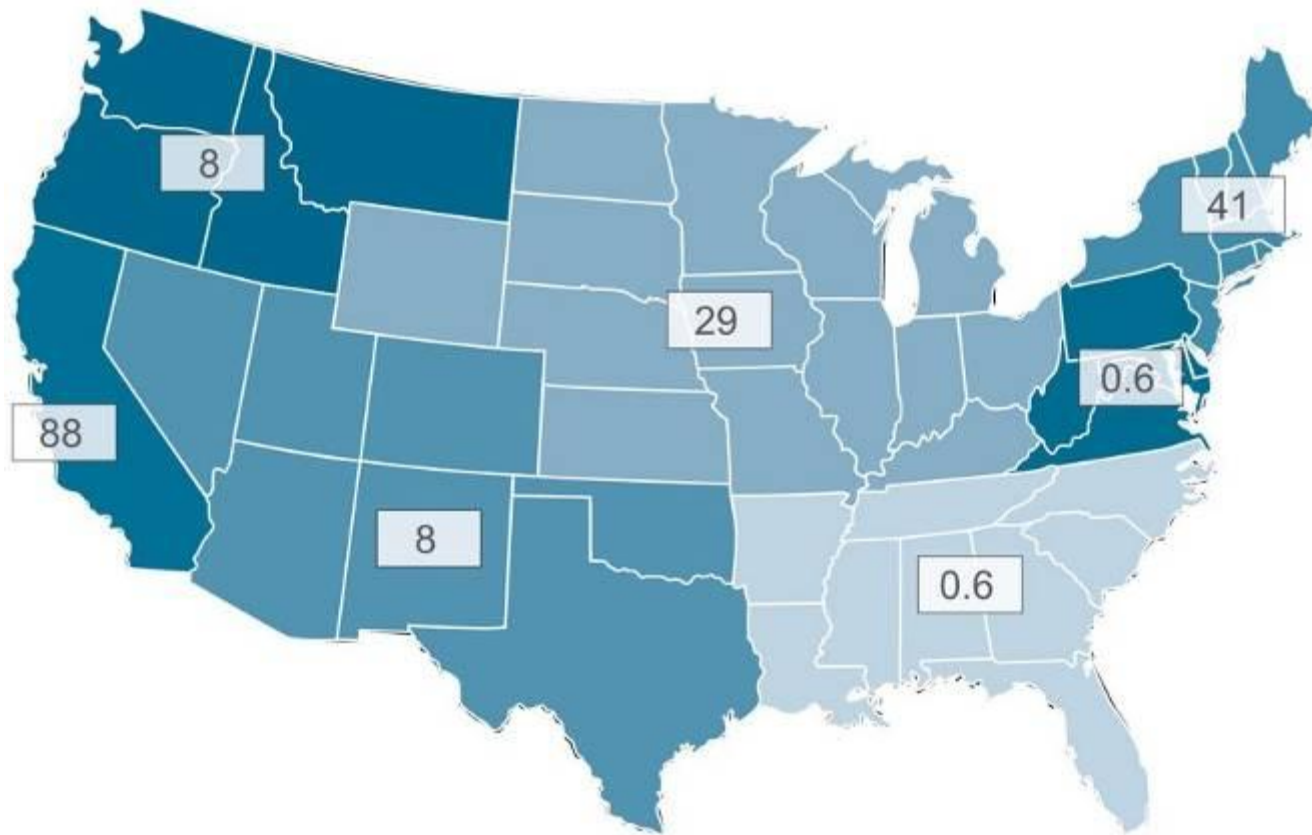
CFL Market Share



Socket Penetration



2008 CFL Incentive Programs



CFL Criteria 4.0



- Released March 7, 2008
- Effective date December 2, 2008
- Medium and candelabra-screw based CFLs
- Elevated Temperature Test required for reflector products
- Independent 3rd Party Testing Program
- Mercury labeling



CFL Criteria 4.0 Transition Timeline



October 17, 2008 – DOE announced an extension of the time period where existing products could continue to use the ENERGY STAR label until July 1, 2009

October 31, 2008 – Manufacturers were notified of their products which do not meet version 4.0

December 2, 2008 – Version 4.0 went into effect

Impacts of the Transition



December 1, 2008

- 3700 qualified models
- 0 Candelabra-based products
- 512 reflectors

December 3, 2008

- 1800 qualified models
- 15 Candelabra-based products
- 33 OEM Reflectors have passed Elevated Temperature Testing

Third-Party Testing Program Status



- The Product Selection Working Group and the Technical and Research Working Groups have been filled
- Stakeholders submitted 136 product nominations
- The Product Selection Working Group has finalized the list of 185 products to be tested
- Shopping for samples will begin in April.
- Expect testing to begin in May

DOE ENERGY STAR Program Update



2008 ENERGY STAR CFL Promotions

Where to Use Web Tool



Create Your Mood!

OFF ON OFF ON

Daylight Bright White Soft White Dimmer
COOLER NEUTRAL WARMER WARM

Spiral Bulbs

If these spiral-shaped light bulbs look familiar it's because they're the most popular type of Compact Fluorescent Lamp (CFL). Spiral CFLs create the same amount of light as traditional incandescent bulbs, but use less energy.

Many traditional bulbs around your home (from 60w to 150w) can be replaced with spirals. There are spirals for dimmers and three-way

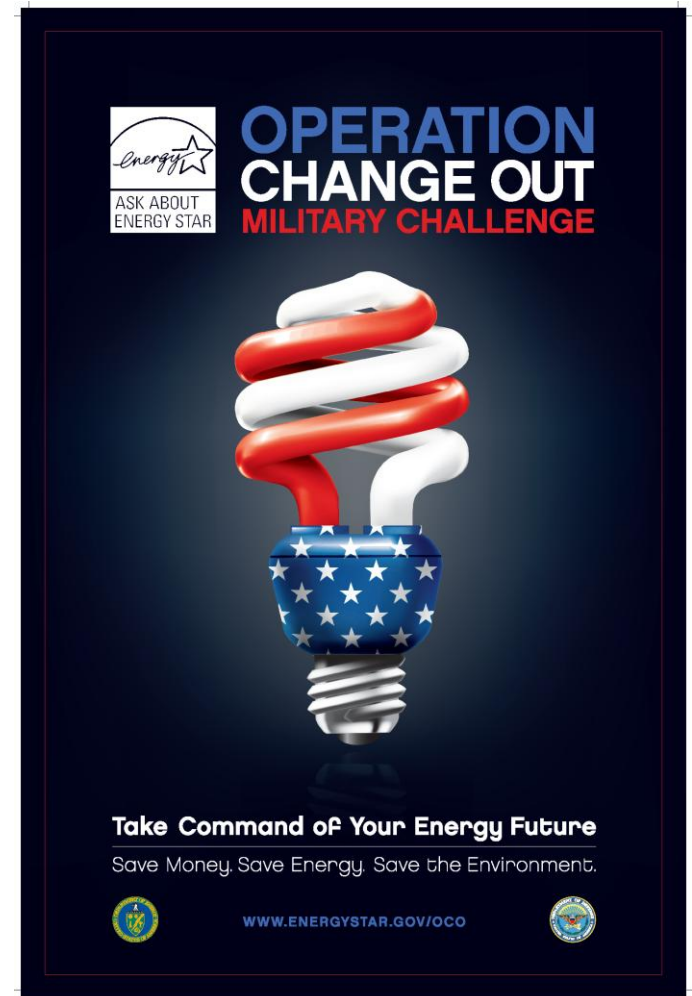
Click Here to Turn All Fixtures On

Spiral A-Shape Globe Tubed Candle Indoor Outdoor 3-Way Dimmable

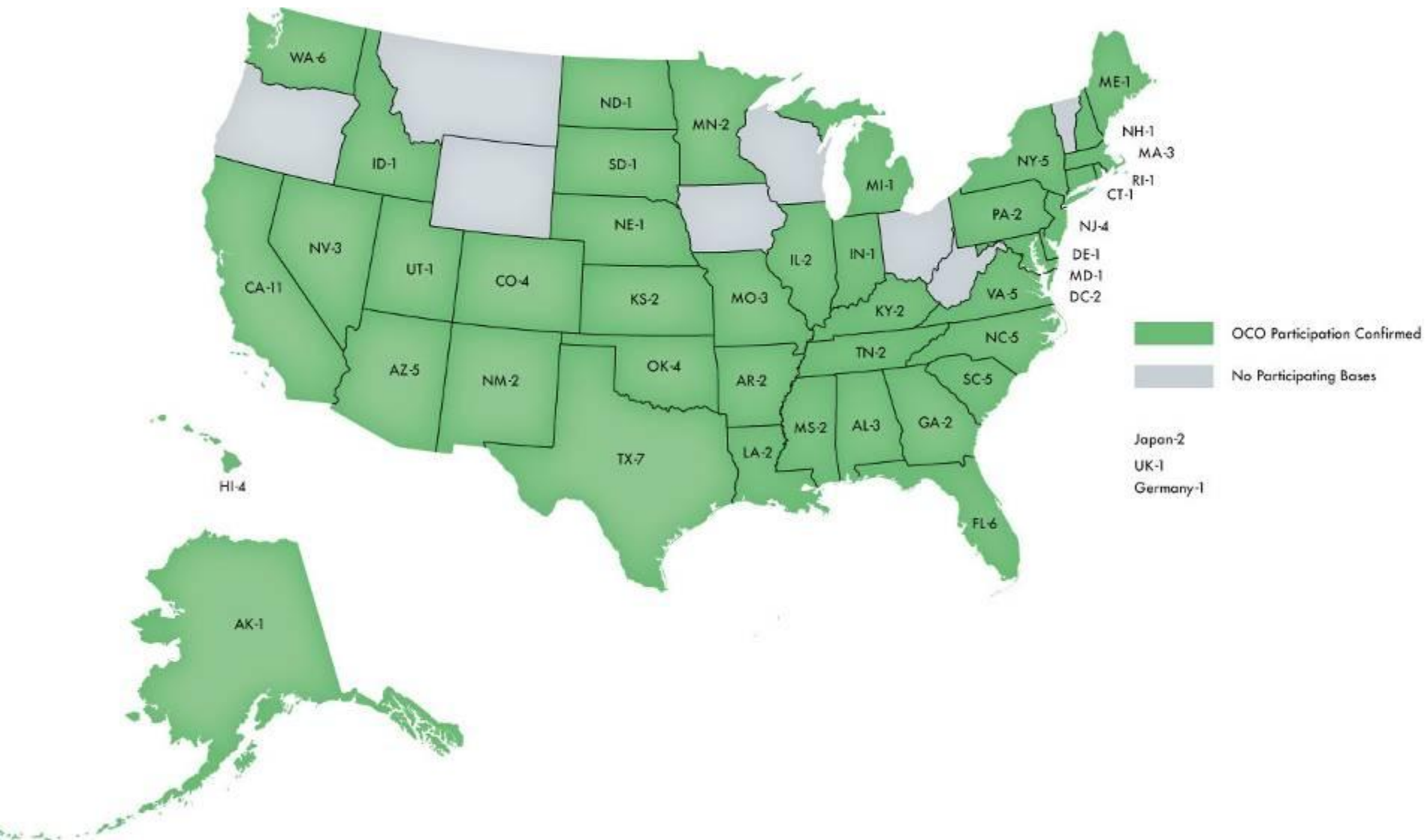
Operation Change Out: The Military Challenge



- Challenge to U.S. military bases to change out inefficient light bulbs and replace them with ENERGY STAR qualified models
- DOE-led campaign, in partnership with the U.S. Department of Defense launched Earth Day, 2008
- Bases, military retailers, private housing providers, energy efficiency program sponsors, other participants



42 States... so far!



CFL Priorities for 2009



- Launch Third Party Testing Program
- Launch re-designed CFL Web pages
- Minimize the time needed for qualifications
 - Launch an on-line product submittal tool
- Integrate partner activities into *Operation Change Out*
 - Military challenges the public
- Increase number of CFL recycling programs
 - Work with industry stakeholders on promoting recycling



Thank You